

CLAIMS

What is claimed is:

1. A capacitor comprising:
 - an electrically conductive plate;
 - an electrically conductive segmented plate defining at least two electrically conductive plate segments;
 - a first capacitor dielectric disposed between the plate and the segmented plate;
 - at least one electrically conductive interconnect coupling one of the at least two plate segments to the plate; and
 - a second capacitor dielectric disposed between the at least two plate segments.
2. The capacitor according to claim 1, wherein one of the at least two electrically conductive plate segments is thinner than the other one.
3. The capacitor according to claim 2, wherein the thinner plate segment is coupled to the plate by the at least one interconnect.
4. The capacitor according to claim 1, wherein the second capacitor dielectric has a high dielectric constant.
5. The capacitor according to claim 1, wherein the at least two plate segments form a lateral capacitor.

6. The capacitor according to claim 1, wherein the at least one electrically conductive interconnect extends through the first capacitor dielectric.
7. The capacitor according to claim 1, wherein the plate and one of the at least two plate segments are each of a first electrical bias, and the other one of the at least two plate segments is of a second electrical bias opposite to the first electrical bias.
8. The capacitor according to claim 1, wherein the capacitor comprises a metal-insulator-metal capacitor.
9. A capacitor comprising:
 - an electrically conductive plate;
 - an electrically conductive segmented plate defining a first plurality of electrically conductive plate segments and a second plurality of electrically conductive plate segments;
 - a first capacitor dielectric disposed between the plate and the segmented plate;
 - at least one electrically conductive interconnect coupling each of the plate segments of one of the first and second plurality of plate segments to the plate; and
 - a second capacitor dielectric disposed between the plate segments.

10. The capacitor according to claim 9, wherein the plate segments of one of the first and second plurality of electrically conductive plate segments are thinner than the plate segments of the other one.
11. The capacitor according to claim 10, wherein the thinner plate segments are coupled to the plate by the at least one interconnects.
12. The capacitor according to claim 9, wherein the second capacitor dielectric has a high dielectric constant.
13. The capacitor according to claim 9, wherein the first and second plurality of plate segments form lateral capacitors.
14. The capacitor according to claim 9, wherein the first plurality of plate segments alternate with the second plurality of plate segments.
15. The capacitor according to claim 9, wherein the at least one electrically conductive interconnects extend through the first capacitor dielectric.
16. The capacitor according to claim 9, wherein the plate and one of the first and second plurality of plate segments are each of a first electrical bias, and the other one of the first and second plurality of plate segments are of a second electrical bias opposite to the first electrical bias.

17. The capacitor according to claim 9, wherein the capacitor comprises a metal-insulator-metal capacitor.

18. A method of fabricating a capacitor, comprising:

forming an electrically conductive plate;

forming a first capacitor dielectric over the plate;

forming at least one via in the first capacitor dielectric;

forming an electrically conductive segmented plate over the first capacitor dielectric, the segmented plate defining at least two electrically conductive plate segments, the at least one via electrically coupling one of the at least two plate segments to the plate; and

forming a second capacitor dielectric between the at least two plate segments.

19. The method according to claim 18, wherein the capacitor comprises a metal-insulator-metal capacitor.

20. A method of fabricating a capacitor, comprising:

forming an electrically conductive plate;

forming a first capacitor dielectric over the plate;

forming a plurality of vias in the first capacitor dielectric;

forming an electrically conductive segmented plate over the first capacitor dielectric, the segmented plate defining a first plurality of electrically conductive plate segments and a second plurality of electrically conductive plate segments, the vias

electrically coupling the conductive plate segments of one of the first and second plurality of plate segments to the plate; and
forming a second capacitor dielectric between the plate segments.

21. The method according to claim 20, wherein the capacitor comprises a metal-insulator-metal capacitor.